## WE CLAIM:

- 1. A process for preparing a calcined zirconia extrudate comprising the steps of:
  - a. preparing a shapable dough which comprises mixing and kneading a particulate zirconia with a solvent to obtain a mixture having a total solids content of from about 50% to about 85% by weight,
  - extruding the shapable dough to form a zirconia extrudate, and
- c. drying and calcining the zirconia extrudate; wherein the particulate zirconia comprises no more than about 15% by weight of zirconia which is other than monoclinic zirconia.
- 2. A process for preparing a calcined cobalt/zirconia extrudate comprising the steps of:
  - a. preparing a shapable dough which comprises mixing and kneading a particulate zirconia and a cobalt precursor with a solvent to obtain a mixture having a solids content of from about 50% to about 85% by weight,
  - extruding the shapable dough to form a zirconia/extrudate, and
  - c. drying and calcining the zirconia/cobalt extrudate;

wherein the particulate zirconia comprises no more than about 15% by weight of zirconia which is other than monoclinic zirconia.

3. A process according to Claim 2 wherein the cobalt precursor is selected from the group consisting of cobalt hydroxide, cobalt acetate, cobalt nitrate, cobalt oxide and mixtures thereof.

- 4. A process according to Claim 3 wherein the cobalt precursor is cobalt hydroxide.
- 5. A process according to any of Claim 1 wherein the total solids content of the shapable dough is in the range of from about 55% to about 80% by weight.
- 6. A process according to Claim 5 wherein the total solids content of the shapable dough is in the range of from about 65% to about 75% by weight.
- 7. A process according to Claim 1 wherein the particulate zirconia comprises no more than about 10% by weight of zirconia which is other than monoclinic zirconia.
- 8. A calcined zirconia extrudate prepared according to the process of Claim 1.
- 9. A calcined zirconia/cobalt extrudate prepared according to the process of Claim 2.
- 10. A process for preparing a calcined cobaltimpregnated zirconia extrudate which comprises the steps
  of:
  - a. preparing a shapable dough which comprises mixing and kneading a particulate zirconia with a solvent to obtain a mixture having a total solids content of from about 50% to about 85% by weight,
  - extruding the shapable dough to form a zirconia extrudate,
  - c. impregnating the zirconia extrudate with a liquid cobalt precursor to form a cobaltimpregnated zirconia extrudate, and
  - d. drying and calcining the cobalt-impregnated zirconia extrudate;

wherein the particulate zirconia comprises no more than about 15% by weight of zirconia which is other than monoclinic zirconia.

- 11. A process according to Claim 10 wherein the liquid cobalt precursor is an aqueous solution of a cobalt salt selected from the group consisting of cobalt nitrate, cobalt acetate, cobalt hydroxide, and mixtures thereof.
- 12. A calcined cobalt impregnated zirconia extrudate prepared according to Claim 10.
- 13. A calcined zirconia extrudate having the following characteristics:
  - a. a pore volume of about 0.3 ml/g or greater;
  - a radial crush strength of about 100 N/cm or greater; and
  - c. a surface area of about 50 m2/g or greater.
- 14. Process for the preparation of higher olefins having from 11 to 14 carbon atoms comprising contacting hydrogen and carbon monoxide under Fischer-Tropsch reaction conditions in the presence of the catalyst of Claim 9 or a calcined cobalt-impregnated zirconia extrudate according to Claim 12.
- 15. Process for the preparation of higher olefins having from 11 to 14 carbon atoms comprising contacting hydrogen and carbon monoxide under Fischer-Tropsch reaction conditions in the presence of the catalyst of Claim 12.
- 16. Process for the preparation of higher olefins having from 11 to 14 carbon atoms comprising contacting hydrogen and carbon monoxide under Fischer-Tropsch reaction conditions in the presence of the catalyst catalyst of Claim 9 or a calcined cobalt-impregnated zirconia extrudate according to Claim 13.
- 17. A process according to Claim 14 wherein the catalyst comprises from about 3 to about 100 parts by weight of cobalt.
- 18. A process according to Claim 15 wherein the catalyst comprises from about 3 to about 100 parts by weight of cobalt.

- 19. A process according to Claim 16 wherein the catalyst comprises from about 3 to about 100 parts by weight of cobalt.
- 20. A process according to Claim 14 wherein the catalyst has an average particle size of 2.2 mm or less.
- 21. A process according to Claim 15 wherein the catalyst has an average particle size of 2.2 mm or less.
- 22. A process according to Claim 16 wherein the catalyst has an average particle size of 2.2 mm or less.
- 23. The process of Claim 14 wherein the amount of catalytic reactive cobalt on the zirconia carrier is preferably in the range from about 3 to about 300 parts by weight for 100 parts by weight of zirconia carrier material.
- 24. The process of Claim 15 wherein the amount of catalytic reactive cobalt on the zirconia carrier is preferably in the range from about 3 to about 300 parts by weight for 100 parts by weight of zirconia carrier material.
- 25. The process of Claim 16 wherein the amount of catalytic reactive cobalt on the zirconia carrier is preferably in the range from about 3 to about 300 parts by weight for 100 parts by weight of zirconia carrier material.